

Bayou Corne Natural Gas Seep

LDEQ Air Monitoring Duties for Drilling Operations at Texas Brine

August 23, 2012

The overall objective is to provide oversight of air monitoring conducted by Texas Brine (and the facility's contractor) during drilling operations. LDEQ personnel will be performing oversight duties from 8:00 a.m. to 4:00 p.m. Monday through Friday. EPA contractors will be performing oversight duties at all other times.

WHEN IN DOUBT, CALL THE LDEQ INCIDENT COMMANDER!

Pre-Arrival Information

- Bring work laptop computer so you can send/receive e-mails and access other important information.
 - Prior to arrival, make sure you can hook up to the internet with a wireless connection.
 - Prior to arrival, make sure you can hook up to the VPN (for LDEQ personnel).
- Bring your PPE.
 - Hard hat, safety shoes, safety glasses, hearing protection, respirator with cartridges
 - Respirator cartridges are available at LDEQ's Incident Command Center at Sportsman's Landing for LDEQ personnel.

Step to Take upon Arrival

- Arrive at the Texas Brine site on time.
 - Oversight personnel arriving for the first time should arrive at least 30 minutes early.
- Sign in and out at the guard house when entering and leaving the site.
 - Guard house is located just prior to the storage tanks and office buildings.
- Report to the LA State Police Incident Command Center trailer at the Texas Brine site.
 - Located on the northwest corner of site (first right)
 - Work space located in the LSP trailer for oversight personnel
 - Introduce yourself and put your name and cell phone # on the whiteboard.
- Find the oversight personnel currently on site from previous shift.
 - Get the "LDEQ incident folder" which contains forms, site map, duties, MultiRAE instructions, etc.
 - Review status from previous shift
 - Facility status (e.g., drilling status; sinkhole/slurry status, etc.)
 - LDEQ's hand-held air monitoring activities (including air monitoring points)
 - LDEQ's oversight of facility's air monitoring program
 - Any problems and issues encountered during previous shift

- Review how to properly operate MultiRAE, if necessary
 - Basic instructions are located in the LDEQ incident folder
- For oversight personnel arriving for the first time, find Scott Borne, or another facility representative to watch safety video.
 - Video will be shown in the lunchroom in blue metal building
 - Sign facility's acknowledgement form after reviewing, if requested to do so
- Review daily IAP and safety plan for drilling operations (to be distributed by LSP)
 - Sign LDEQ's sign-in sheet acknowledging review of facility safety video and safety plan (to be located at the LSP Incident Command Center)

Facility Air Monitoring Information

THIS IS A BRIEF OVERVIEW OF THE FACILITY'S AIR MONITORING PROGRAM THAT LDEQ IS OVERSEEING.

- Facility has 6 wireless monitors (AreaRAE) set out at the site.
 - Drilling wellhead, well pad #3, office area, and 3 on other side of sinkhole/slurry
 - Monitoring for H2S, VOC, CO, LEL, and O2
- Batteries for the monitors will be changed twice daily (once at 7 to 8 am and again at 3 to 5 pm); a bump test will also be conducted. The action will be recorded in a log while the monitor is in transition.
 - If a parameter does not pass within 5% of the bump test, a calibration will be performed and recorded.
- Onsite facility personnel (and/or contractors) are monitoring the real time data.

Action Levels

	LOW LEVELS	HIGH LEVELS
H2S	10	25
VOC	80	100
CO	100	200
LEL	10	20
O2	---	*19.5 / 23.5
		*low and high range for O2

- **Low levels** – These are warning levels that there may be a problem either with the monitoring equipment, interference from an unidentified source, or that there is an actual significant, elevated reading that should be monitored more closely. Any observed monitoring reading approaching these levels require the onsite facility and oversight personnel to further investigate.
- **High levels** – These action levels require immediate action. Any observed monitoring reading approaching these levels require oversight personnel to immediately notify the

onsite LSP and onsite facility personnel. Oversight personnel will immediately evacuate from the monitored area and/or facility. Facility evacuation will be coordinated with onsite LSP and facility personnel.

Personnel Duties

Oversight personnel will conduct their duties on a 2-hour cycle. Therefore, the following activities should be completed 4 times during an 8-hour shift.

- **Hand-held monitoring around the facility** - conduct monitoring at the 9 pre-established monitoring points (see site map for locations; exact locations are flagged)
 - Conduct monitoring with the MultiRAE
 - When conducting air monitoring from your vehicle, remember to turn off your engine and wait 3 minutes before recording the reading.
 - When conducting air monitoring from your vehicle, remember to extend the MultiRAE outside of the vehicle.
 - Time spent at each site conducting readings should be at least 3 to 5 minutes.
 - If the H₂S, VOCs, CO or LEL readings are above 0.0 (or O₂ is anything other than 20.9), ensure that there is no interference from other sources in the area.
 - Record data on log sheet EXACTLY as appearing on the monitor.
 - If readings are confirmed, discuss finding with the onsite facility air monitoring contact. Some low levels of VOCs, H₂S and CO can be expected; however, there should be no reason for any LEL readings. (NOTE: It will not be unusual to observe odors during the monitoring run.)
 - See Action Levels for additional actions to be taken.
 - When monitoring near the facility's AreaRAE monitors at monitoring location #9 (well Pad #3) and monitoring location #3 (behind offices), also check the readings for the facility's AreaRAE. Any discrepancies in readings between the MultiRAE and AreaRAE must be addressed with the onsite facility air monitoring contact. NOTE: Due to the sensitive nature of this equipment, minor deviations between the readings can be expected.
 - Best professional judgment should be used to determine whether you should immediately contact the Incident Commander for additional instruction, such as whether to collect a canister sample, for any of the following:
 - Significant elevated readings
 - Very strong odors
 - Major discrepancies between monitors that cannot be resolved
 - All significant issues should be documented in the email summary report.
- **Sinkhole/Slurry status survey (during daylight hours)** - While at monitoring Station #9 (located at Well Pad #3), spend 5 minutes visually surveying the conditions of the booms, any additional diesel sheen and general conditions of the slurry area from the well pad.
 - Oversight personnel are NOT allowed inside the sinkhole/slurry site (**SEE SAFETY ISSUES**)

- If there are significant issues, best professional judgment should be used to determine whether you should immediately contact the Incident Commander for additional instruction.
- All significant issues should be documented in the email summary report.
- **Oversight of facility's air monitoring readings** - spend approximately 15 minutes with the facility air monitoring person (located in trailer closest to the large storage tanks)
 - Review real-time monitoring readings (and readings from previous 2 hour period if available)
 - Confirm readings are within safe ranges
 - Review any recorded alarm readings
 - Review any calibration and/or maintenance information conducted on air monitoring equipment
 - Any observed issues (e.g., readings other than 0 for VOCs, H2S and CO and 20.9 for O2, calibration and maintenance issues, equipment malfunction, alarms, unattended monitoring equipment, etc.) must be discussed with the onsite facility air monitoring contact.
 - Some low levels of VOCs, H2S and CO can be expected; however, there should be no reason for any LEL readings.
 - If there are significant issues, best professional judgment should be used to determine whether you should immediately contact the Incident Commander for any additional instructions, such as whether to collect a canister sample.
 - All significant issues should be documented in the email summary report.
- **Recharge the MultiRAE** - Turn off and charge MultiRAE between air monitoring events.
 - NOTE: The MultiRAE has a limited battery life.

Other Duties

- Assist the LSP, as necessary, in manning the Command Center between monitoring runs.
- Attend meetings/discussions, as requested
- Provide a briefing to the person that will relieve you.
 - Include any pertinent information that may have occurred during your shift or overall for the incident.

Reporting

- Email summary report
 - Must be sent prior to leaving the site
 - Oversight personnel working the early morning shift must send an email by 7:30 a.m. (NOTE: Any significant changes between 7:30 a.m. and 8:00 a.m. must be phoned to the LDEQ for inclusion into the morning Situation Report.)
 - Send to the following personnel:
 - Louis.Martin@la.gov

- Sherri.Courtney@la.gov
- Regenia.Taylor@la.gov (Faye)
- Karen.Price2@la.gov (make sure to include the "2" in the email)
- Others (for EPA contractors)
- Include the following information:
 - Number of air monitoring runs conducted
 - Meter used (e.g., MultiRAE)
 - Parameters monitored (i.e., VOC, O2, LEL, CO, H2S)
 - Statement as to levels observed (e.g., all levels were below low level, etc.)
 - Any additional activities undertaken (e.g., attending meeting, etc.)
 - Any problems or issues
- Immediately contact the LDEQ Incident Commander
 - Use best professional judgment to determine if the LDEQ Incident Commander should be immediately contacted regarding significant issues!

Recordkeeping

- Monitoring Report Form
 - Complete form for each air monitoring event
 - Record all readings as observed on the meter
 - Include any comments as appropriate
 - Place completed forms in the wire basket located in the LSP trailer labeled "Completed LDEQ Monitoring Forms" (to be picked up daily by LDEQ Incident Commander)
- LDEQ personnel must complete 214 (original with timesheet, copy to Heather Toney), k-time form (hard copy; NOT ONLINE), and timesheet upon returning to the office.

Available Equipment

- Multirae (located in the LSP trailer; to be charged between monitoring runs)
- Handheld radio
- Flashlight

Safety Issues

- Always sign in when entering the site; always sign out when leaving the site.
- Oversight personnel should not enter the drilling area, unless required by their duties to do so. If going into the drilling area for any purpose, you must check in with the driller.
 - located in the large trailer with "Tanmar" sign immediately past the drilling rig
- All proper PPE (hard hat, safety glasses, safety shoes) must be worn when going to the back of the facility beyond the LSP Incident Command Center.
 - Ear protection is required in the drilling area.

- Respirators must be available at all times even though they will only be required during “emergency conditions.”
- Assumption Parish OEP has provided a handheld radio. The radio is being monitored by the security person at the guard house. You must keep this radio with you when conducting air monitoring.
- Oversight personnel are NOT allowed inside the sinkhole/slurry site that is taped off, unless explicitly approved by LDEQ’s Chris Piehler.
- This facility is located in a swamp environment. Therefore, caution must be taken to remain on the roads and/or gravel areas. WHEN CONDUCTING NIGHTTIME MONITORING ACTIVITIES, OVERSIGHT PERSONNEL ARE REQUIRED TO REMAIN IN THEIR VEHICLE, TO THE EXTENT POSSIBLE.
- Use insect repellent. Insect repellent is available at the LDEQ Incident Command Center at Sportsman’s Landing.
- Oversight personnel should minimize trips offsite during their shift, and may leave the site only for short periods of time (less than 30 minutes).
- There is a lot of vehicular traffic, especially big rigs, at the site. Use care in traversing the site.

Contact Information

- Direct Line to Drilling Site: 985-236-4101
 - Leroy Arabie, Drilling Engineer
 - Mike Haynes, Drilling Engineer
- Safety Officer: Scott Borne, Texas Brine: 985-637-9778
- Facility contacts regarding issues with air monitoring
 - Scott Whitelaw, Texas Brine: 713-202-0452
 - Jody Shugart (contractor with Michael Pisani & Associates): 985-237-5091
 - Earle Wright (contractor with Technical Monitoring Services): 225-752-9212
 - Mike Hebert (contractor with Sage Environmental): 225-931-6270
- LSP Incident Commander: Lee Lewis, 225-405-5081
- LDEQ Incident Commander: 225-281-2703
- Other LDEQ contacts
 - Karen Price (Deputy IC) 225-936-8832
 - Mike Hahn 225-219-3030; 225-978-4926
 - Sherri Courtney 225-219-3334; 225-936-2261
 - Jason Fontenot 225-219-3028; 225-229-3384
 - Louis Martin 225-219-3611; 225-252-6077
 - Faye Taylor 225-219-3361; 225-335-5139
 - Chris Piehler 225-329-9744
- EPA and contractors
 - Greg Fife, EPA 214-789-2879
 - David Bordelon, Weston 225-772-7921

- Robert Sherman, Weston 225-573-9785
- Other contacts
 - John Boudreaux, Assumption Parish OEP 985-637-8918 (c)
 - Anne Marsh, Assumption Parish OEP 985-772-0875

NOTE: WHEN IN DOUBT, CALL THE LDEQ INCIDENT COMMANDER!